

## An exosome-based translational strategy to mitigate Alzheimer's disease neuropathology

# **Grant Award Details**

An exosome-based translational strategy to mitigate Alzheimer's disease neuropathology

Grant Type: Inception - Discovery Stage Research Projects

Grant Number: DISC1-10079

Project Objective: This project will determine the effectiveness of a potentially transformational stem cell based

therapy—human stem cell derived exosomes—to ameliorate the neuropathologies associated

with AD.

Investigator:

Name: Janet Baulch

Institution: University of California, Irvine

Type: PI

Disease Focus: Alzheimer's Disease, Neurological Disorders

Human Stem Cell Use: Embryonic Stem Cell

Award Value: \$157,650

Status: Active

### **Grant Application Details**

Application Title: An exosome-based translational strategy to mitigate Alzheimer's disease neuropathology

#### **Public Abstract:**

#### Research Objective

These studies will determine whether stem cell derived exosomes (nano-scale vesicles) can be used to treat the symptoms of Alzheimer's disease (AD).

#### **Impact**

Our stem cell-derived exosome therapy will provide a viable approach to ameliorate the relentless progression of AD that severely impacts quality of life for millions of patients and their families.

#### **Major Proposed Activities**

- Evaluate whether exosome therapy can reduce the symptoms of early stage AD including anxiety, depression, and learning and memory.
- Evaluate whether exosome therapy can reduce the symptoms of advanced stage AD including anxiety, depression, and learning and memory.
- Determine whether exosome therapy can slow the appearance of AD related changes typically observed in the early stage AD brain.
- Determine whether exosome therapy can reduce the appearance of AD related changes typically observed in the advanced stage AD brain.

# California:

Statement of Benefit to In the US, California has the most cases of AD, a burden on patients, their families, and the health care system. As such, AD is an unmet medical need that requires new therapies to improve disease management. This project tests a transformational idea—human stem cell derived exosome therapy. These studies will identify a novel stem cell-based strategy and a viable approach to impede the progression of AD and it's symptoms that severely impact quality of life for patients and their families.

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